

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: DAWN GARRETT Examiner #: 76107 Date: 10/19/2004
Art Unit: 1774 Phone Number 301-272-1523 Serial Number: 10700916
Mail Box and Bldg/Room Location: Room 10A54 Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Organic Element For Electroluminescent Devices
Inventors (please provide full names): William Begley, Tukaram Hatwar,
Manju Rajeswaran, David Giesen, Natasha Andrievsky
Earliest Priority Filing Date: 11/4/2003

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search Formula (I) as described in claim 1.

(112(4) in claim 28: Compound INV-8 falls outside scope of claim 1.)

STAFF USE ONLY

Searcher: ES Type of Search: _____ Vendors and cost where applicable
NA Sequence (#) _____ STN \$147.99
Searcher Phone #: _____ AA Sequence (#) _____ Dialog _____
Searcher Location: _____ Structure (#) (1) Questel/Orbit _____
Date Searcher Picked Up: _____ Bibliographic (and) Dr Link _____
Date Completed: 10-20-04 Litigation (and) Lexis/Nexis _____
Searcher Prep & Review Time: 5 Fulltext _____ Sequence Systems _____
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L4 STR L3
L5 STR L1
L6 STR L5

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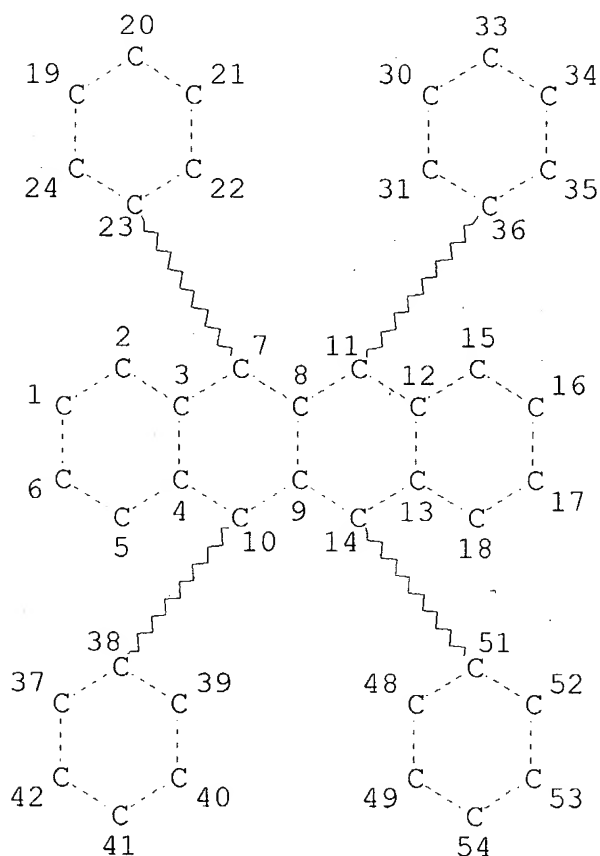
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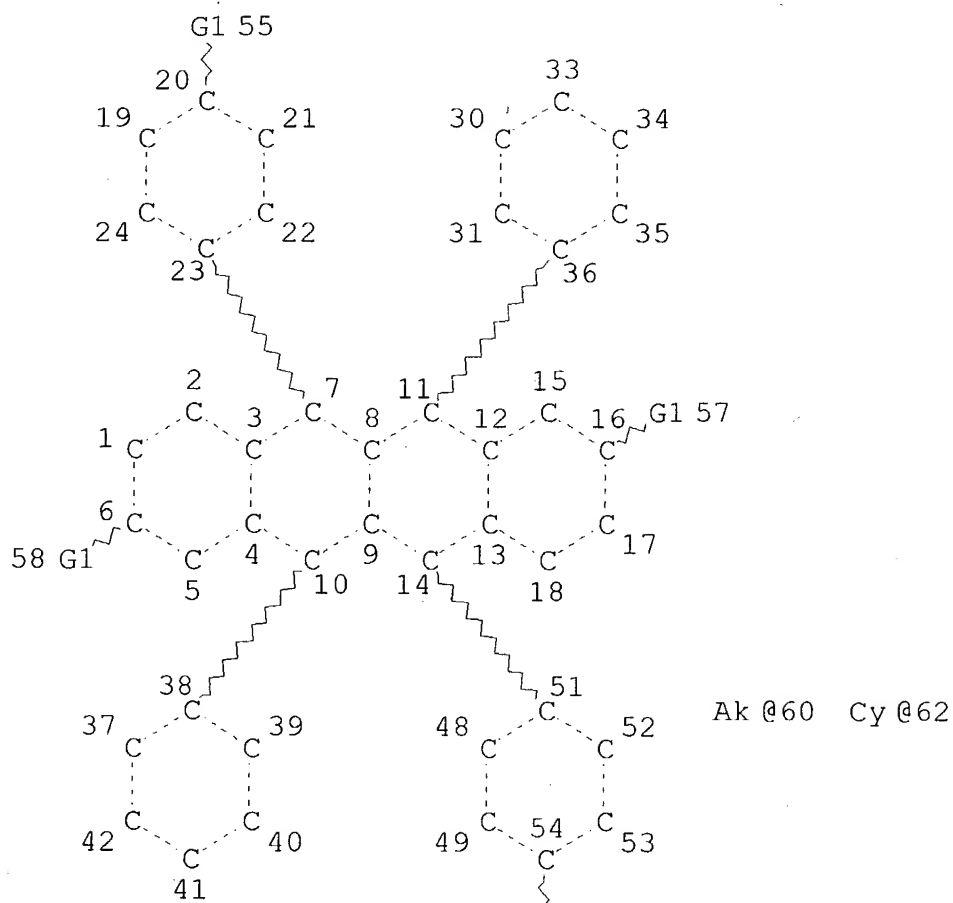
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NODE ATTRIBUTES:
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 42

STEREO ATTRIBUTES: NONE
L5 STR



Page 1-A

G1 56

Page 2-A

VAR G1=60/62

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GGCAT IS BRA SAT AT 60

GGCAT IS SAT AT 62

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

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NUMBER OF NODES IS 48

STEREO ATTRIBUTES: NONE

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100.0% PROCESSED 185 ITERATIONS
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1 ANSWERS

=> file zcaplus

FILE 'ZCAPLUS' ENTERED AT 16:03:19 ON 20 OCT 2004
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L12 ANSWER 1 OF 1 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:128568 ZCAPLUS

DOCUMENT NUMBER: 140:366126

TITLE: Effects of tertiary butyl substitution on the
charge transporting properties of rubrene-based
films

AUTHOR(S): Fong, H. H.; So, S. K.; Sham, W. Y.; Lo, C. F.;
Wu, Y. S.; Chen, C. H.

CORPORATE SOURCE: Department of Physics and Center for Advanced
Luminescence Materials, Hong Kong Baptist
University, Kowloon Tong, Hong Kong, Peop. Rep.
China

SOURCE: Chemical Physics (2004), 298(1-3), 119-123 X
CODEN: CMPHC2; ISSN: 0301-0104

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

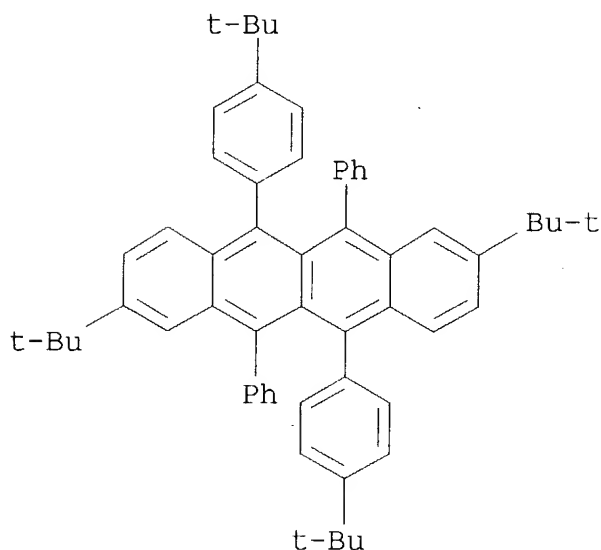
AB The charge transporting properties of rubrene (5,6,11,12-
tetraphenylnaphthacene or RB), and a new rubrene-based complex,
tetra(t-butyl)-rubrene [2,8-di(t-butyl)-5,11-di[4-(t-butyl)phenyl]-
6,12-diphenylnaphthacene or TBRB], were examd. in the form of
amorphous films as functions of elec. field and temp. by means of
time-of-flight technique. At room temp., the hole mobility .mu. for
RB is 7-9 .times. 10⁻³ cm² V⁻¹ s⁻¹ whereas .mu. for the more bulky
TBRB is about 2 .times. 10⁻³ cm² V⁻¹ s⁻¹. The microscopic
conduction mechanism in both materials can be modeled by the
Gaussian disorder model in which hopping conduction occurs through a
manifold of sites with energetic and positional disorder. The
energetic disorder in RB and TBRB is almost identical and is about

78 meV in each case, and is mainly controlled by van der Waals interaction. The t-Bu groups in TBRB induce large fluctuations in the spatial sepn. among TBRB mols. and result in an increase in the positional disorder, and hence a redn. in the hole mobility.

IT 682806-51-5, 2,8-Di(tert-butyl)-5,11-di[4-(tert-butyl)phenyl]-6,12-diphenylnaphthacene
(TBRB; effects of tertiary-Bu substitution on charge transporting properties of rubrene-based films)

RN 682806-51-5 ZCAPLUS

CN Naphthacene, 2,8-bis(1,1-dimethylethyl)-5,11-bis[4-(1,1-dimethylethyl)phenyl]-6,12-diphenyl- (9CI) (CA INDEX NAME)



IT 682806-51-5, 2,8-Di(tert-butyl)-5,11-di[4-(tert-butyl)phenyl]-6,12-diphenylnaphthacene
(TBRB; effects of tertiary-Bu substitution on charge transporting properties of rubrene-based films)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT